

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**



Application No.: **10/687,012** Group Art Unit: **2862**  
Filing Date: **October 16, 2003** Examiner: **Not Assigned**  
Inventor: **Romalis et al.**  
Title of Application: **High Sensitivity Atomic Magnetometer and Methods for Using Same**

Mail Stop Missing Parts  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**PRELIMINARY AMENDMENT - DRAWINGS**

Dear Sir:

This Preliminary Amendment responds to the requirement for replacement drawings in compliance with 37 CFR 1.84 (l) and (p)(1) identified in the Notice to File Missing Parts of Nonprovisional Application mailed January 30, 2004.

**DRAWINGS**

Please find appended hereto Drawing Sheets 1-12 containing Amended Figures 1-13. The drawings have been amended by providing heavier lines in the drawings, replacing colors with shading in black or gray, and enlarging certain drawings.

In amended Figs. 1 and 5, a shaded box (Fig. 1) or oval (Fig. 5) representing magnetic shielding identified by reference number **180** is now present. Although the reference number **180** appears in both Figs. 1 and 5, the shielding was absent in the original Figs. 1 and 5 as filed due to a computer error. The magnetic shielding is identified in the specification as filed on page 20, 4<sup>th</sup> paragraph, and page 25, paragraph 6, and referred to at those locations as reference number **180**.

Figs. 7, 8 and 9 as originally filed had poor resolution due to low resolution pixel copying.  
In amended Figs. 7, 8 and 9 the graphical representations have been enhanced.

No new matter is introduced by these amended drawings.

Respectfully submitted,

Date: March 30, 2004

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Henry E. Auer (Reg. No.)

Agent for Applicant  
Proteus Patent Practice LLC  
P. O. Box 1867  
New Haven, CT 06508  
Phone: (203) 777-4607  
Fax: (203) 624-8594  
Email: [proteuspatent@snet.net](mailto:proteuspatent@snet.net)